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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/867,612	06/02/1997	YI WANG	ALX-149	2350

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EXAMINER
GAMBEL, PHILLIP

ART UNIT	PAPER NUMBER
1644	#41

DATE MAILED: 07/26/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

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09/867,612

APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO.

EXAMINER

ART UNIT	PAPER NUMBER
1644	38

DATE MAILED:

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

OFFICE ACTION SUMMARY

☑ Responsive to communication(s) filed on 11/5/01

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 D.C. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☑ Claim(s) 1-14, 17-34 is/are pending in the application.
Of the above, claim(s) _____ is/are withdrawn from consideration.
☐ Claim(s) _____ is/are allowed.
☑ Claim(s) 1-14, 17-34 is/are rejected.
☐ Claim(s) _____ is/are objected to.
☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
☐ The specification is objected to by the Examiner.
☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.
☐ received in Application No. (Series Code/Serial Number) _____.
☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☑ Notice of Reference Cited, PTO-892
☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
☐ Interview Summary, PTO-413
☐ Notice of Draftperson's Patent Drawing Review, PTO-948
☐ _____

DETAILED ACTION

1. The request filed 11/5/01 (Paper No. 36) for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 08/867,612 is acceptable and a CPA has been established. An Office Action on the CPA follows.

Applicant's amendment, filed 11/5/01 (Paper No. 37), has been entered.
Claims 17 and 18 have been amended.
Claims 19-34 have been added.

Claims 1-14 and 17-34 are pending and being acted upon presently

Claims 15 and 16 have been canceled previously.

2. The text of those sections of Title 35 USC not included in this Action can be found in a prior Action. This Office Action will be in response to applicant's arguments, filed 11/5/01 (Paper No. 37). The rejections of record can be found in previous Office Actions (Paper Nos. 21/31/34).

3. Again, applicant should amend the first line of the specification to update the status of the priority application, which is now abandoned.

4.The application is required to be reviewed and all spelling, TRADEMARKS, and like errors corrected.

"BALB/c" is the proper designation of this mouse strain. (e.g., see page 56, line 21 of the specification).

Trademarks should be capitalized or accompanied by the ™ or ® symbol wherever they appear and be accompanied by the generic terminology. Although the use of trademarks is permissible in patent applications, the proprietary nature of the trademarks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Appropriate corrections are required

5. The amendment, filed 11/5/01 (Paper No. 37), is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

The amendments to pages 56 and 59-60 (see Appendices A, B, C and D) do not appear to have adequate written description in the application as-filed.

It does not appear that the specification provides for the adequate written description of "unique ability to bind to both alpha and beta chains of the human C5 protein in accordance with the teachings of Sims, et al. U.S. Patent No. 5,135,916" (see Appendices A and B).

Similarly, the written description of "two surprising properties" and "binds to both the alpha and beta chains of the human C5 protein" in the Appendices C and D do not appear to have written description in the specification as filed.

Applicant is required to review the underlined portions or newly added materials of the amendments to the specification set forth Appendices A-D and either cancel the new matter in the reply to this Office Action or provide sufficient direction to the written description for these amendments to the application as filed.

6. Claims 19-34 are rejected under 35 U.S.C. § 112, first paragraph, as the specification does not contain a written description of the claimed invention, in that the disclosure does not reasonably convey to one skilled in the relevant art that the inventor(s) had possession of the claimed invention at the time the application was filed.

The specification as originally filed does not provide support for the invention as now claimed: "which binds the alpha chain of C5".

Applicant's amendment, filed 11/5/01 (Paper No. 37), directs support to the amendatory material to pages 56 and 59-60 of the specification, similarly filed 11/5/01 (Paper No. 37) (See Appendices A-D) for the written description for the above-mentioned "limitation".

However, the disclosure of anti-C5 antibodies as C5 blockers does not provide sufficient written description for an antibody "which binds the alpha chain of C5".

In contrast, the instant claims appear to set forth a new subgenus by reciting However, the disclosure of anti-C5 antibodies as C5 blockers does not provide sufficient written description for an antibody "which binds the alpha chain of C5".

In contrast, the instant claims appear to set forth a new subgenus by reciting an antibody "which binds the alpha chain of C5", which, in turn, encompasses C5-specificities not disclosed in the specification as filed.

Applicant's reliance on generic disclosure and possibly a single species does not provide sufficient direction and guidance to the "claimed limitations" having the features currently claimed

It cannot be said that a subgenus is necessarily described by a genus encompassing it and a species upon which it reads. In re Smith 173 USPQ 679, 683 (CCPA 1972). See MPEP 2163.05(b).
Applicant's reliance on generic disclosure and possibly a single species does not provide sufficient direction and guidance to the "claimed limitations" having the features currently claimed

The instant claims now recite limitations which were not clearly disclosed in the specification as-filed, and now change the scope of the instant disclosure as-filed. Applicant is claiming a subgenus not supported by the specification as-filed. Such limitations recited in the present claims, which did not appear in the specification, as filed, introduce new concepts and violate the description requirement of the first paragraph of 35 U.S.C. 112.

Applicant is required to cancel the new matter in the response to this Office action

Alternatively, applicant is invited to provide sufficient written support for the "limitation" indicated above.

7. Claims 18 and 34: It is apparent that the 5G1.1 antibody is required to practice the claimed invention. As a required element, it must be known and readily available to the public or obtainable by a repeatable method set forth in the specification. If it is not so obtainable or available, the enablement requirements of 35 USC 112, first paragraph, may be satisfied by a deposit of the cell line / hybridoma which produces this antibody. See 37 CFR 1.801-1.809.

In addition to the conditions under the Budapest Treaty, applicant is required to satisfy that all restrictions imposed by the depositor on the availability to the public of the deposited material will be irrevocably removed upon the granting of a patent in U.S. patent applications.

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

10. Upon reconsideration of the common ownership of the instant application and that of Wang et al. (U.S. Patent No. 6,074,642) set forth in applicant's amendment, filed 11/5/01 (Paper No. 37) (see Appendix H); the previous rejection under 35 U.S.C. § 103(a) in further view of Wang et al. (U.S. Patent No. 6,074,642) has been obviated in view of 35 U.S.C. § 103(c).

11. Claims 1-17 are rejected under 35 U.S.C. § 102(e) as being anticipated by Sims et al. (U.S. Patent No. 5,635,178). Sims et al. has been added to the rejection of record. Sims et al. teach methods of inhibiting platelet or endothelial cell activation by complement proteins comprising the administration of an antibody which specifically binds to a component forming the C5b-9 complex, including effective amounts to inhibit disorders such as arthritis (see entire document, including Claims 1-3).

Applicant is reminded that no more of the reference is required than that it sets forth the substance of the invention. The claimed functional limitations encompassing properties of the active ingredient in the claims methods would be inherent properties of the claim methods to treat rheumatoid arthritis with antibodies that binds to a component forming the C5b-9 complex.

Also, the Courts have held that there is no requirement that those of ordinary skill in the art know of the inherent property. See MPEP 2131.01(d) and MPEP § 2112 - § 2113 for case law on inherency.

Also, see Ex parte Novitski 26 USPQ 1389 (BPAI 1993); Mehl/Biophile International Corp. V. Milgraum, 52 USPQ2d 1303 (Fed. Cir. 1999); Atlas Powder Co. V. IRECO, 51 USPQ2d 1943 (Fed. Cir. 1999); Bristol-Myers Squibb Company v. Ben Venue Laboratories 58 USPQ2d 1508 (CAFC 2001

10. Claims 1-14, 17, and newly added claims 19-33 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Sindelar et al. (U.S. Patent No. 5,173,499; 1449) AND/OR Sims et al. (U.S. Patent No. 5,635,178) in view of Auda et al. (Rheumatol. Int.10: 185-18, 1990; 1449) , Wurzner et al. (Complement Inflamm. 8: 328-340, 1991; 1449) and Montz et al. (Cell. Immunol. 127: 337-351, 1990; 1449) essentially for the reasons of record.

Claims 1-14, 17, 18 and newly added claims 19-34 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Sindelar et al. (U.S. Patent No. 5,173,499; 1449) AND/OR Sims et al. (U.S. Patent No. 5,635,178) in view of Auda et al. (Rheumatol. Int.10: 185-18, 1990; 1449) , Wurzner et al. (Complement Inflamm. 8: 328-340, 1991; 1449) and Montz et al. (Cell. Immunol. 127: 337-351, 1990; 1449) as applied to claims 1-14, 17, 18 and 29-34 above and in further evidence of Rollins et al. (U.S. Patent No. 5853,722; of record) essentially for the reasons of record. for the reasons of record

It is noted that Sims et al. has been added to the rejection of record. Sims et al. teach methods of inhibiting platelet or endothelial cell activation by complement proteins comprising the administration of an antibody which specifically binds to a component forming the C5b-9 complex, including effective amounts to inhibit disorders such as arthritis (see entire document, including Claims 1-3).

Sims et al. differs from the claimed methods by not disclosing the particular C5-specificities and properties of the complement-specific antibodies encompassed by the claimed methods.

Wurzner et al. does teach complement-specific antibodies, including antibodies that inhibit complement-mediated interactions and functions via multiple epitopes, including their ability to inhibit the biological consequences of C5a and TCC generation (see entire document, including the Discussion).

Similarly, Rollins et al. does teach complement-specific antibodies with properties associated with their ability to inhibit complement-mediated interactions and functions (see entire document, including column 12, paragraph 4).

Given the properties of the anti-complement antibodies, including their ability to inhibit an inflammatory condition characterized, to some degree, with immune complexes, as taught by Rollins et al.; the ordinary artisan would have been motivated to substitute the anti-complement antibodies taught by Wurzner et al. and Rollins et al. in the instant methods of inhibiting another inflammatory condition with an expectation of success at the time the invention was made. The prior art teachings of Sindelaar and Sims et al. clearly direct the ordinary artisan to apply complement inhibitors, including complement-specific antibodies to inhibit inflammatory conditions, including arthritis. It was well known at the time the invention was made to the ordinary artisan that arthritis was a known condition of established or chronic joint inflammation in a patient.

11. Applicant's arguments, filed 111/5/01 (Paper No. 37) in conjunction with the Wang Declaration, of record, have been fully considered but are not found convincing essentially for the reasons of record.

Applicant's arguments and the examiner's rebuttal are essentially the same as of record.

Applicant argues in conjunction with certain legal decisions that to establish obviousness, there must be some teaching, suggestion or motivation in the prior art to make the specific combination that was made by applicant.

Applicant's arguments in conjunction with the Wang declaration under 37 C.F.R. § 1.132, filed 3/25/99 (Paper No. 18), have been fully considered but are not found convincing.

Wang asserts that it was known at the time the invention was made that animals carrying a genetic defect such that they can produce no C5 can still established joint inflammation.

Further Wang asserts that while preliminary prophylaxis results showed a an unexpectedly dramatic effect in inhibiting the development of joint inflammation, he predicted that C5 blocker administration would not be effective in treating established joint inflammation in the absence of anti-T cell treatments for effective treatment.

Again, applicant argues that Sindelar et al. is directed to chemically synthesized non-protein organic compounds for the inhibition and/or suppression of immune activity and that Sindelar et al. does not disclose the use of antibodies.

While Sindelar et al. is directed to chemical compounds, Sindelar et al. clearly teach the biological effects of C5a ,including its role in arthritis (see Background of the Invention, including Tables II / III) and clearly teach administering inhibitive compounds which ameliorate or prevent detrimental effects caused by the complement system, including C5a for diseases or disorders such as those listed in Table III (e.g. see Therapeutic Uses of the Compounds of the Invention).

Again, applicant is reminded that Sims et al. (U.S. Patent No. 5,635,178) has been added to the rejection of record. Sims et al. teach methods of inhibiting platelet or endothelial cell activation by complement proteins comprising the administration of an antibody which specifically binds to a component forming the C5b-9 complex, including effective amounts to inhibit disorders such as arthritis (see entire document, including Claims 1-3).

Therefore, the prior art is directed towards inhibiting the same target (complement, C5 or C5a) and the same disorders or diseases (e.g. arthritis as it reads on established joint disease), encompassed by the claimed invention.

It is noted that Sims et al. teach targeting various diseases or disorders by inhibiting complement-mediated events, including arthritis and conditions such as vascular occlusion, reocclusion after surgery, coronary thrombosis and myocardial infarction, which are the subject of the methods taught by Rollins et al. Therefore, it was recognized by the ordinary artisan at the time the invention was made that inhibiting complement-mediated events, including C5- / C5a-mediated events, the ordinary artisan could inhibit various disorders and that targeting one disorder could provide an expectation of success in treating the other. For example, the teachings of Rollins et al., including its teaching of the 5G1.1. specificity on inhibiting complement /C5a activity in extracorporeal circulation could inhibit arthritis, as indicated by the teachings Sindelar et al. (e.g. see Table III) as well as Sims et al. (e.g. Claims 1-3)

Again, applicant argues that Wurzner et al. does not disclose the use C5-specific antibodies to treat joint inflammatory conditions. At best, applicant asserts that Wurzner only speculates that such anti-C5 antibodies may be useful to arrest the complement cascade, which may be beneficial for some diseases.

Applicant argues that Wurzner et al. teach C5b-specific antibodies and not C5a-specific antibodies.

With respect to the C5a specificity, Wurzner et al. clearly teach antibodies that inhibit the biological effects of C5a and TCC (see Discussion).

Again, applicant argues that Montz et al. is directed toward the role of anti-C5 antibodies in T cell proliferation in vitro and not to treating joint inflammation in a patient.

Applicant asserts that Auda et al. description of elevated C5b-9 complex levels in patients with chronic rheumatic diseases is interesting, but refers to the mouse studies in which C5 was completely absent due to a genetic defect continued to develop established joint inflammation. Applicant further argues that Auda et al. do not suggest which of many complement component complexes would be the most effective, including the importance of the alpha chain of C5.

Applicant argues that Rollins et al. does not remedy the deficiencies of Sindelar et al., Auda et al., Wurzner et al. and Montz et al. Applicant asserts that Rollins et al. teach the use of anti-C5 antibodies to block the generation of activated complement components C5a and C5b following extracorporeal circulation during cardiopulmonary bypass, which is distinguished from the instant established joint inflammation.

Again, with respect to nonanalogous art, it has been held that the prior art reference must either be in the filed of applicant's endeavor or, if not then be reasonably pertinent to the particular problem with which the applicant was concerned in to order to be relied upon as a basis for rejection of the claimed invention. See In re Oetiker 24 USPQ2d 1443 (Fed. Cir. 1992).

In this case, the combination of prior art references are drawn to the inhibition of complement-mediated activity, including C5-mediated activity, and the inhibition of complement-mediated inflammatory processes, such as arthritis. See Sindelaar et al. and Sims et al.

Also, it appears that applicant's arguments addressed the references individually. One cannot show non - obviousness by attacking references individually where the rejections are based on combinations of references. In re Keller , 642 F.2d 413, 208 USPQ 871 (CCPA 1981); In re Merck & Co., Inc. , 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). See MPEP 2145.

Applicant's arguments are not found persuasive.

13. No claim is allowed.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phillip Gambel whose telephone number is (703) 308-3997. The examiner can normally be reached Monday through Thursday from 7:30 am to 6:00 pm. A message may be left on the examiner's voice mail service. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Chan can be reached on (703) 308-3973. Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center 1600 receptionist whose telephone number is (703) 308-0196.

Serial No. 08/867612
Art Unit 1644

Papers related to this application may be submitted to Technology Center 1600 by facsimile transmission. Papers should be faxed to Technology Center 1600 via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The CM1 Fax Center telephone number is (703) 305-3014.

Phillip Gambel, PhD.
Primary Examiner
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January 22, 2002